



# Air Quality Monitoring



**Enviro**

Technology Services Ltd

part of  CuraTerra

**World Leading Environmental Monitoring Systems**

**Enviro Technology Services Ltd – World Leading Technology & Systems For Air Quality Monitoring.**

Founded in 1983, Enviro Technology (ET) has firmly established itself as the world's leading supplier and service provider of air quality monitoring systems.

During this time it has remained faithful to its founding principles, to offer the very best monitoring technology available and to provide the highest levels of service and support.

ET can supply anything from just a single analyser right the way through to an entire, bespoke, sophisticated air quality monitoring network built around the clients exact needs.

Like a jigsaw puzzle, an air quality monitoring system is a sum of all the component pieces. As a result of 34 years of highly specialised knowledge and experience, ET can design, build, install and support virtually any combination of monitoring technology for virtually any type of application.

Operating an ISO 9001:2008 quality management system, quality is built in to every level of the business with customer care at its very core.



# Continuous 'Ambient'

## Gas Analysers - T Series



### T100 Series UV Fluorescence Analysers

Combines the proven UV Fluorescence principle with state-of-the-art microprocessor technology to provide accurate and precise measurements of SO<sub>2</sub>, H<sub>2</sub>S, TRS and sulphur compounds.

### T200 Series Chemiluminescence Analysers

Provides the sensitivity, stability, accuracy and precision for the measurement of NO, NO<sub>2</sub>, NO<sub>x</sub> NH<sub>3</sub>



T200 NOx Analyser

Choose from low range standard and high range models from PPT, PPB to PPM concentrations.

### NEW

**T200P & T200UP (Low level) Chemiluminescence NO, NO<sub>2</sub> and NO<sub>x</sub> Analyser with photolytic 'Blue Light' converter.**

### T300 Series IR Absorption Series Analysers

Standard and low range analysers capable of measuring CO, CO<sub>2</sub> and N<sub>2</sub>O by Gas Filter correlation IR Absorption Technology.

### T400 Series UV Absorption O<sub>3</sub> Analysers

Real-time, high precision and fast response O<sub>3</sub> analysers from PPB, to PPM to % level O<sub>3</sub> applications.

### T500 Cavity Attenuated Phase Shift (CAPS) NO<sub>2</sub> Analyser

Representing the next generation of criteria pollutant monitoring technology for the direct measurement of Nitrogen Dioxide (NO<sub>2</sub>) in air. The T500U provides a direct NO<sub>2</sub> measurement, eliminating the need for catalytic conversion or reagents.



T500 CAPS NO<sub>2</sub> Analyser

NO<sub>2</sub> NO NO<sub>x</sub> NH<sub>3</sub> H<sub>2</sub>S CO CO<sub>2</sub> O<sub>3</sub> N<sub>2</sub>O VOCs HC's



# Continuous 'Ambient'

## Gas Analysers - N Series



### Meet the new N Series gas instruments from Teledyne API

The N series product line has been successfully designed to meet the expected rigorous demands of a reference method analyser with a simplified and maintenance-friendly architecture to ensure ease of use.

#### Intuitive operation

All N series products achieve intuitive operation and calibration through the NumaView™ Software interface which also allows access to the instrument's large internal data storage buffer from a remote PC or tablet.

The customisable graphical user interface (GUI) gives the user fast and efficient access to instrument status whilst allowing the user to control what they see and what it brings to their attention as well as measurement data and diagnostic parameters in either numeric or graphical form.

#### Benefits

N series instruments are reliable and accurate, providing high data quality with low cost of ownership. This can be achieved with the complete range of Teledyne API ambient air quality monitoring instruments, which are backed by a standard 2 year warranty.

#### Power saving

*As well as improved reliability and enhanced diagnostic features, real world test results show the new N Series platform makes the same precise measurements whilst offering considerable power savings (compared to T-series instruments) thanks to an all-new DC architecture.*



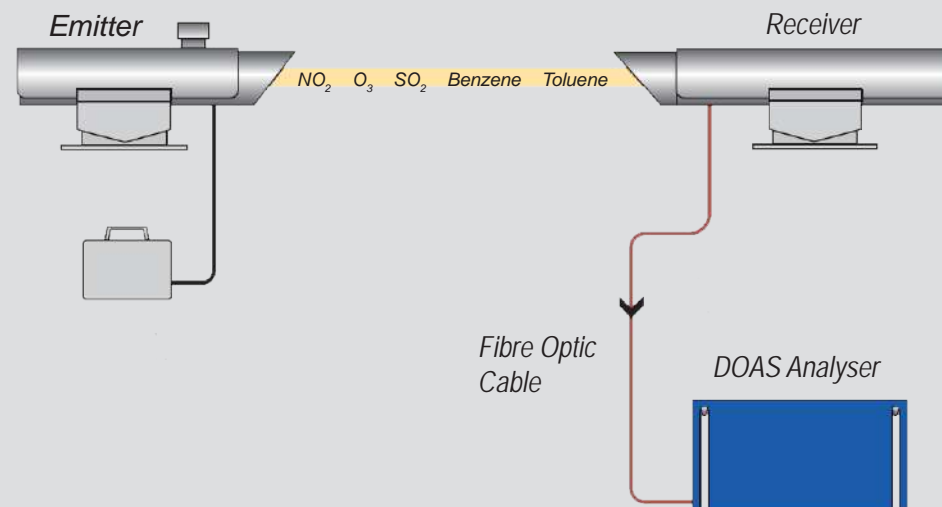
# Open-Path Monitoring

Enviro Technology specialises in open-path, air quality monitoring systems based on Differential Optical Absorption Spectroscopy (DOAS).

DOAS systems are fully automatic, extremely flexible and, due to a minimum of human intervention, cost-effective to run. Every minute, several thousand cubic metres of air interact with a beam of light between a light-source and a receiver to provide a more representative sample than can be obtained with point sampling techniques.

ET systems are MCERTS, TÜV and US EPA approved.

Gases measured include NO, NO<sub>2</sub>, SO<sub>2</sub>, O<sub>3</sub>, NH<sub>3</sub>, Benzene, Toluene, Xylene and many others.



One DOAS system will operate several light-paths continuously measuring multiple gases over paths of up to 1km long. Any gas specified in the system's software can be measured, providing a facility to meet specific needs in a wide variety of applications.



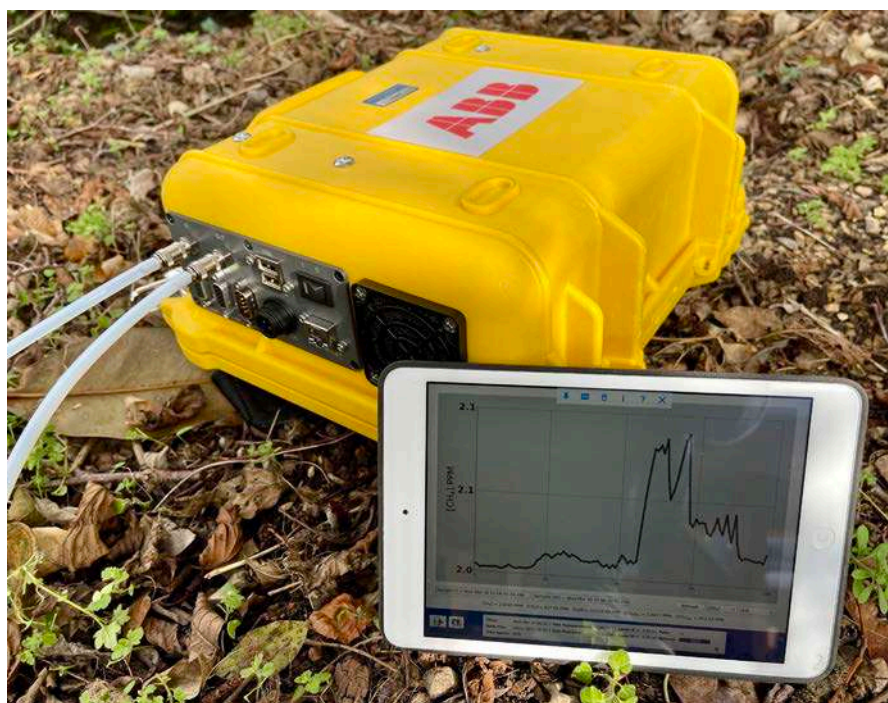
# Greenhouse Gas Monitoring, Isotopic Gas Monitoring and more...



Rackmount Greenhouse Gas Analyser



Isotopic N<sub>2</sub>O Analyser



Microportable Greenhouse Gas Analyser (MGGA)

4th Generation Cavity Ringdown Spectroscopy (CRDS) Off-Axis ICOS technology for fast, ultra precise, high accuracy measurements of:

- CO<sub>2</sub> \ CH<sub>4</sub> \ H<sub>2</sub>O (upto 10Hz)
- N<sub>2</sub>O \ CO
- Isotopic H<sub>2</sub>O
- Isotopic CH<sub>4</sub>
- Isotopic CO<sub>2</sub>
- Isotopic N<sub>2</sub>O
- NH<sub>3</sub>
- HF
- HCL
- CH<sub>4</sub>
- NO<sub>2</sub>

# Mercury Monitoring



Mercury Vapour Analyser 2537x

## Continuous Ultra -Trace Mercury Analyser

Continuous, simple and unattended operation providing precision analysis of total gaseous mercury in ambient air with an update rate as low as 2.5 minutes and a detection limit of <0.1 ng/m<sup>3</sup> (12 parts per quadrillion by volume).

The 2537x is easy to setup, use, and maintain and has long been known for its stable performance in rugged conditions.



# Particulate Monitoring

ET supplies a wide range of particulate monitors and samplers for  $PM_{10}$ ,  $PM_{2.5}$ ,  $PM_{1.0}$  & TSP

Continuous Real Time Monitoring



BAM 1020 Continuous Beta-attenuation Particulate Monitor



ES-642 Particulate Monitor



532 Handheld Particle Monitor



ES-405 Particulate Profiler



EDM 180 (Environmental Dust Monitor)

# Meteorological, Weather & Aerosols

Atmospheric and meteorological conditions play a major part in the formation and dispersion of air pollution. ET provides a range of meteorological sensors for stand-alone use or integration into air quality monitoring systems.



All-in-One (AIO) Weather Sensor  
WS / WD / Temp / RH / BP



Precipitation Gauge



Ultrasonic WS / WD



Micro Pulse LiDAR (MPL)  
Measures the profiles and optical properties of clouds and aerosols in the atmosphere.



Mini MPL



Wideband Integrated Bioaerosol Sensor (WIBS-5)

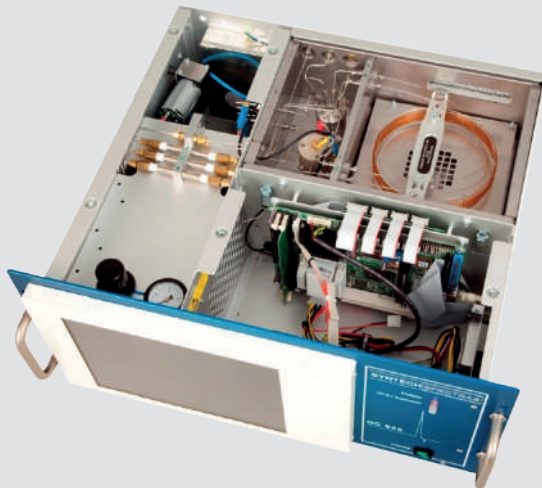
# VOC / HC Monitoring

## GC955 POPC / VOC / BTX Analysers

Measures ozone precursors in ambient air. Two separate sample and column systems are used to measure C2-C5 and C6-C10 fractions. Methane and non-methane compounds are measured separately without relying on the efficiency of a catalytic converter.



GC955-600 Series Benzene / BTEX Analyser



# Housings and Enclosures

In fact, ET can supply everything from small roadside enclosures through to large, walk-in cabins & trailers and even entire air quality networks.

ET has particular experience in the design and manufacture of:

- Roadside AQM Systems
- Permanent & portable 'walk-in' AQM systems
- Vehicle and trailer based AQM systems and mobile laboratories.

ET specialises in 'bespoke' designs and special purpose systems i.e. Emergency response.



Vehicle Based Mobile Laboratory



Static Enclosure



Walk-in Enclosure



Small Roadside Enclosure

# Software

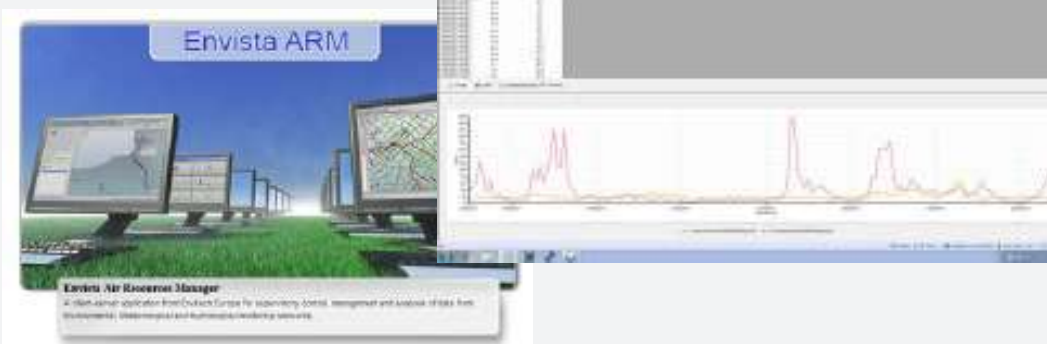
Continuous air quality monitoring equipment can generate huge quantities of data. Enviro Technology offers a range of software to help turn collected data into meaningful information that clients can use for many different requirements including:

- Regulatory reporting
- Data analysis
- Public information and websites
- Dispersion modelling
- Air quality forecasting

Taking advantage of internet distribution and “cloud” storage, users can access and work with their air quality data anywhere in the world and at any time using common internet browsers.



Envista ARM  
(Air Resources Manager)



# Calibration Systems

Many ET gas analysers can be specified with on-board internal calibration systems. In addition, ET supplies a range of station and portable calibrators for QA/QC checking.



T700 Dynamic Dilution Calibrator



Portable 750  
Dilution Calibrator

# Data Logging and Comms

ET supplies a wide range of data loggers and communications technology to enable fast, secure, reliable and efficient data collection and transfer.

- Fully expandable data loggers
- Webloggers
- GSM, GPRS, 4G / mobile internet
- Mobile wifi & webcams





# Low cost sensor

*The Zephyr is a compact and portable air pollution sensor for the measurement of gases and particulate matter formed from harmful emissions.*



## Applications

The Zephyr sensor can be used for a wide range of applications including local planning, enforcement and mitigation strategies as well as commercial applications.

- Central & local governments
- Environmental planning
- Urban planning
- Smart & connected cities
- Healthcare
- Automotive
- Industrial emissions
- Schools, colleges & universities
- Waste

## Key Features

- Accurate cartridge calibration
- Replaceable cartridge system
- Static or mobile use
- Compact and lightweight
- Solar panel and DC power supply
- Flexible data access
- Low cost



**The accurate, low cost, air quality sensor that really delivers.**

**The Zephyr measures:**

**$\text{NO}_2$ ,  $\text{NO}$ ,  $\text{O}_3$ ,  $\text{PM}_{10}$ ,  $\text{PM}_{2.5}$  and  $\text{PM}_{10}$  as standard with optional  $\text{CO}$ ,  $\text{SO}_2$  and  $\text{H}_2\text{S}$ .**

# Service and Support

Service and maintenance is a major part of our business and also central to our philosophy, to provide the highest quality service and customer support in our industry.

Our analysers and systems are very well designed and very reliable. For many AQM and CEMS applications, the analysers are in continuous operation, 24 hours a day, 7 days a week, 365 days per year.

To provide the best service in our industry we have:

- The UK's largest team of service engineers.
- Regional services bases throughout the UK.
- Service bases in Ireland and the Middle East.

In addition, all of our service engineers are factory trained to service and support the equipment we sell, and we also operate a very highly regarded Technical Support Engineer telephone helpdesk.

## Testimonials

*"I am really happy with the service ET provide, the response time is brilliant and the advice given is always professional and apt."*

*Regards, Dr Jolanta Obszynska, Leicester City Council*

*"Having a friendly, local engineer is an advantage, also we think your move towards an electric fleet is a great asset."*

*Christina Saich, Canterbury City Council*



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